

# ALYSE N. MAKSIMOSKI, PH.D.

## EDUCATION

2023	<b>PH.D.</b>	<b>INTEGRATIVE BIOLOGY</b> Thesis: “Birds of a feather flock together: gregarious song, flocking, and the songbird brain” Advisor: Dr. Lauren V. Ritters, Ph.D. University of Wisconsin-Madison
2017	<b>B.Sc.</b>	<b>ZOOLOGY CUM LAUDE</b> Minors: LGBTQ & Sexuality Studies; Women’s & Gender Studies Lyman Briggs College; Honors College Michigan State University

## POSITIONS

SPRING 2025 — <i>PRESENT</i>	<b>POSTDOCTORAL RESEARCHER</b> Dr. Devaleena Pradhan, Ph.D. Idaho State University, Dept. of Biology
FALL 2024	<b>LABORATORY STAFF SCIENTIST</b> Dr. Lizbeth De la Cruz, Ph.D. Idaho State University, Dept. of Biology
SPRING – SUMMER 2024	<b>POSTDOCTORAL RESEARCHER</b> Dr. Lauren V. Ritters, Ph.D. University of Wisconsin-Madison, Dept. of Integrative Biology
2019 — 2023	<b>DOCTORAL RESEARCHER</b> Dr. Lauren V. Ritters, Ph.D. University of Wisconsin-Madison, Dept. of Integrative Biology
2018 — 2019	<b>FIELD RESEARCHER</b> Kinda baboon behavior, sociality, dominance, ecology Kasanka Baboon Project Kasanka National Park, Zambia
2016, 2017 — 2018	<b>RESEARCH ASSISTANT</b> Comparative primatology, behavior, physiology, evolution Dr. Jason Kamilar, Ph.D. University of Massachusetts-Amherst, Dept. of Anthropology
2017 — 2018	Gray squirrel behavior, vocalizations, human disturbance, ecology Dr. Sarah Partan, Ph.D. Hampshire College, Dept. of Animal Behavior
2017	Spotted hyena maternal care, behavior, dominance, endocrinology Dr. Kay Holekamp, Ph.D. Michigan State University, Dept. of Integrative Biology
2016 — 2017	Comparative rodent neurophysiology, behavior, evolution Dr. Laura Smale, Ph.D. Michigan State University, Dept. of Psychology

2014

Honeybee navigation, behavior, foraging, communication

Dr. Fred C. Dyer, Ph.D.

Michigan State University, Dept. of Integrative Biology

## TEACHING AND MENTORING

SPRING 2024

SPRING 2020, 2023

### GUEST LECTURER

Brain Communication & Evolution (Zoo 400)

Hormones, Brain, & Behavior (Psych 513)

SUMMER 2020, '23

### MENTOR

Biological Interactions Summer Research Program

Wisconsin Institute for Science Education and Community Engagement

FALL 2021, SPRING '22, '23

SPRING 2021

### GRADER

Animal Biology (Bio/Zoo 101)

Hormones, Brain, & Behavior (Psych 513)

FALL 2022

SUMMER 2022

SPRING 2021

SPRING 2020

### TEACHING ASSISTANT

Introductory Biology (Bio/Zoo151)

Animal Biology (Bio/Zoo 101)

Animal Biology Laboratory (Bio/Zoo 102)

Hormones, Brain, & Behavior (Psych 513)

## PUBLICATIONS

\*\* Denotes undergraduate mentee author

**Alyse N. Maksimoski**, Tavia A. Levenson\*\*, Changjiu Zhao, Lauren V. Ritters. *In prep*. Evidence that flocking behavior is rewarded by singing, flock mates, and mu opioid receptors in the nucleus accumbens. *PLOS One*.

Patrick K. Monari, Xin Zhao, Emma R. Hammond, **Alyse N. Maksimoski**, Radmila Petric, Candice Malone, Lauren V. Ritters, Catherine A. Marler. 2024. Conditioned preferences: Gated by experience, context, and endocrine systems. *Hormones and Behavior* 161; DOI: [10.1016/j.yhbeh.2024.105529](https://doi.org/10.1016/j.yhbeh.2024.105529). **Invited contribution**

Chinweike N. Asogwa, Changjiu Zhao, Brandon J. Polzin, **Alyse N. Maksimoski**, Sarah A. Heimovics, and Lauren V. Ritters. 2023. Distinct patterns of activity within "columns" of the periaqueductal gray are associated with functionally-distinct birdsongs. *Annals of the New York Academy of Sciences* 1530; DOI: [10.1111/nyas.15066](https://doi.org/10.1111/nyas.15066). **Invited contribution**

**Alyse N. Maksimoski**, Sharon A. Stevenson, Brandon J. Polzin, Changjiu Zhao, Elsa M. Luebke\*\*, Lauren V. Ritters. 2023. The motivation to flock correlates with vocal-social behaviors and dopamine-related gene expression in male European starlings. *Hormones and Behavior* 153; DOI: [10.1016/j.yhbeh.2023.105374](https://doi.org/10.1016/j.yhbeh.2023.105374). **Invited contribution**

Brandon J. Polzin, **Alyse N. Maksimoski**, Sharon A. Stevenson, Changjiu Zhao, and Lauren V. Ritters. 2022. Mu opioid receptor stimulation in the medial preoptic area and nucleus accumbens facilitates song and reward in flocking European starlings. *Frontiers in Physiology* 13; DOI: [10.3389/fphys.2022.970920](https://doi.org/10.3389/fphys.2022.970920).

Lauren V. Ritters, Brandon J. Polzin, **Alyse N. Maksimoski**, Sharon A. Stevenson, Sarah J. Alger. 2022. Birdsong and the neural regulation of positive emotion. *Frontiers in Psychology* 13; DOI: [10.3389/fpsyg.2022.903857](https://doi.org/10.3389/fpsyg.2022.903857). **Invited contribution**

**Alyse N. Maksimoski**, Brandon J. Polzin, Sharon A. Stevenson, Changjiu Zhao, Lauren V. Ritters. 2021.  $\mu$ -opioid receptor stimulation in the nucleus accumbens increases vocal-social interactions in flocking European starlings, *Sturnus vulgaris*. *eNeuro* 2 September 2021, 8 (5); DOI: [10.1523/ENEURO.0219-21.2021](https://doi.org/10.1523/ENEURO.0219-21.2021). **Featured research**

Kamilar, Jason M., Spriggs, Amanda N., **Maksimoski, Alyse**, & Bradley, Brenda J. 2020. Climatic predictors of primate hair length. *American Journal of Physical Anthropology* 171: 136-136.

Jason M. Kamilar, Amanda N. Spriggs, **Alyse Maksimoski**, and Brenda J. Bradley. 2019. Are there clade level differences in the sexual dimorphism of primate hair morphology? *American Journal of Physical Anthropology* 168: 119.

## POSTERS AND PRESENTATIONS

\*\* Denotes undergraduate mentee author

**Alyse N. Maksimoski**. August 2024. Birds of a feather flock together: gregarious song, flocking, and the songbird brain. [Idaho State University Biology Seminar Series](#). **Invited talk**

**Alyse N. Maksimoski**. April 2024. Birds of a feather flock together: gregarious song, flocking, and the songbird brain. University of Wisconsin Brain Communication & Evolution (Zoo 400).

**Alyse N. Maksimoski**, Tavia A. Levenson\*\*, Changjiu Zhao, Lauren V. Ritters. 2024. The neural regulation of affective states associated with social contact and separation in European starlings. Society for Behavioral Neuroendocrinology conference.

**Alyse N. Maksimoski**, Changjiu Zhao, Tavia A. Levenson\*\*, Lauren V. Ritters. 2023. Neural mechanisms underlying the reinforcement of gregariousness in flocking songbirds. Society for Neuroscience conference.

Grace Preston\*\*, **Alyse Maksimoski**, Lauren Ritters. 2023. The function of calls in fall flocks of European starlings, *Sturnus vulgaris*. Introductory Biology Undergraduate research symposium.

Ella Butzine\*\*, **Alyse Maksimoski**, Lauren Ritters. 2023. Androgen receptor gene expression is minimally related to the gregarious song production of *Sturnus vulgaris*. Introductory Biology Undergraduate research symposium.

Tavia Levenson\*\*, **Alyse Maksimoski**, Lauren Ritters. 2022. Reward of flocking and the avoidance of isolation in gregarious songbirds. Introductory Biology Undergraduate research symposium.

**Alyse N. Maksimoski**, Changjiu Zhao, Brandon J. Polzin, Sharon A. Stevenson, Elsa M. Luebke\*\*, Lauren V. Ritters. 2022. The motivation to flock relates to vocal-social behaviors and dopamine-related gene expression in the nucleus accumbens and medial preoptic nucleus in male European starlings, *Sturnus vulgaris*. Society for Behavioral Neuroendocrinology conference.

**A.N. Maksimoski**, B.J. Polzin, S.A. Stevenson, C. Zhao, L.V. Ritters. 2021. Mu opioid receptor stimulation in the nucleus accumbens increases vocal-social interactions in flocking European starlings, *Sturnus vulgaris*. Society for Behavioral Neuroendocrinology conference. **Trainee Poster Award**

Jason M. Kamlar, Amanda N. Spriggs, **Alyse Maksimoski**, and Brenda J. Bradley. 2019. Are there clade level differences in the sexual dimorphism of primate hair morphology? American Association of Physical Anthropology conference.

Katrina Groeller, **Alyse Maksimoski**. 2017. The Bi Experience: Exposing Bi/Pan Marginalization on Michigan State University's Campus. University Undergraduate Research and Arts forum.

Kylie Ayers, **Alyse Maksimoski**, Rebecca Rice. 2015. The effects of intraspecific competition on aggressive behaviors in male Thomson's gazelles. Behavioral Ecology of African Mammals study abroad.

Cassandra LaMarche, Eamon Devlin, Rachel Rolinski, **Alyse Maksimoski**. 2014. Antibiotic resistant bacterial growth in sand compared to a common soil mixture on athletic fields. Biology II: Cell and Molecular Biology research symposium.

Jennifer A. Gravrok, **Alyse N. Maksimoski**, Fred C. Dyer. 2014. Causes and consequences of negative incentive contrast effect of nectar feeding bees. Mid-Michigan Symposium for Undergraduate Research Experiences.

Taylor J. Jolliff, Stephanie J. MacDonald, **Alyse N. Maksimoski**, Benjamin M. Tacia. 2014. The effect of human foot traffic on the riparian zone plants on the banks of the Red Cedar River. Biology I: Organismal Biology research symposium.

## AWARDS, SCHOLARSHIPS, HONORS

2024	<a href="#">Elsevier Behavioral Neuroendocrinology Award</a> Society for Behavioral Neuroendocrinology	<b>\$2,000</b>
2024	<a href="#">Undergraduate Mentor Award</a> University Wisconsin-Madison	<b>\$2,000</b>
2023	<b>Student Research Grants Competition Award</b> University Wisconsin-Madison Graduate School	<b>\$600</b>

2023	<b>Graduate Summer Research Award</b> University of Wisconsin-Madison Dept. of Integrative Biology	<b>\$9,770</b>
2022	<b>Rita and Kenneth Hoots Graduate Student Scholarship</b> University of Wisconsin-Madison Department of Integrative Biology	<b>\$2,000</b>
2022	<b>Gary Quick Memorial Scholarship</b> University of Wisconsin-Madison Dept. of Integrative Biology	<b>\$1,000</b>
2021	<b>Trainee Poster Award for Graduate Students</b> Society for Behavioral Neuroendocrinology	<b>\$200</b>
2021 - '23	<b>John Jefferson Davis Travel Award</b> University of Wisconsin-Madison Department of Integrative Biology	<b>\$800, \$800, \$1,000</b>
2015, '17	<b>Midwestern BLGTA College Conference Travel Award</b> Michigan State University	<b>\$300/year for 2 years</b>
2015	<b>Presidential Study Abroad Scholarship</b> Michigan State University Office of Study Abroad	<b>\$3,000</b>
2015	<b>Lyman Briggs College Study Abroad Scholarship</b> Michigan State University Lyman Briggs College	<b>\$1,500</b>
2013 - '17	<b>Dean's Honors List</b> Michigan State University	
2013 - '17	<b>Honors Competitive Scholarship</b> Michigan State University Honors College	<b>\$5,000/year for 4 years</b>
2013 - '17	<b>Honors College National Scholarship</b> Michigan State University Honors College	<b>\$13,000/year for 4 years</b>

## TECHNIQUES AND SKILLS

<b>BEHAVIORAL OBSERVATIONS</b>	Scan, all occurrence, ad libitum, focal animal sampling Hyenas, squirrels, baboons, bees, birds, gazelles
<b>PSYCHOLOGICAL ASSAYS</b>	Conditioned place preference, choice paradigms, food preference, mild aversive foot dips
<b>ANIMAL CARE</b>	Songbirds (cage, colony, aviary), bees (colony), fish (colony)
<b>VIDEO ANALYSIS</b>	BORIS software
<b>CRYOSTAT SECTIONING</b>	Fresh, fixed, slide-mounted, free floating 20-250 microns
<b>DISSECTION</b>	Tissue biopsy, punching (for qPCR), whole body dissection (bird, mouse, rat)
<b>STEREOTAXIC SURGERY</b>	Aseptic and clean techniques (birds) Cannula implantation, micro infusion
<b>PHARMACOLOGY</b>	Site-directed, peripheral (birds)
<b>HISTOLOGY</b>	Immunohistochemistry (single, double), Nissl, RNA scope (triple)
<b>QPCR</b>	RNA extraction, cDNA conversion, qPCR assays, primer design and validation
<b>CONFOCAL IMAGING</b>	Zeiss 710, Olympus FV1000 ImageJ, QuPath softwares
<b>STATISTICAL ANALYSIS</b>	GraphPad Prism, Statistica, Excel

## PROFESSIONAL SOCIETIES

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2024 - <i>PRESENT</i>	National Center for Faculty Development and Diversity
2023	Society for Advancement of Chicanos/Hispanics & Native Americans in Science
2021 - <i>PRESENT</i>	Society for Neuroscience
2021 - <i>PRESENT</i>	Society for Behavioral Neuroendocrinology

## MENTORSHIP EXPERIENCE

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2024	R. Fu	Undergraduate student	University of Wisconsin
2023	A. White	Undergraduate student	University of Wisconsin
2023 - 2024	E. Butzine	Undergraduate student	University of Wisconsin
2023 - 2024	G. Preston	Undergraduate student	University of Wisconsin
2022 - 2024	T. Levenson	Undergraduate student	University of Wisconsin
2021 - 2023	E. Luebke	Undergraduate student	University of Wisconsin
2022	R. Blair	High school student	Lewis & Clark College
2020	L. Wartley	Undergraduate student	Fort Valley State University
2019	M. Sullivan	Undergraduate student	University of Wisconsin

## MENTORSHIP AND TEACHING COURSES

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SUMMER 2024	<b>Mentoring Undergraduate Students</b> National Research Mentoring Network
FALL 2023	<b>The Discussion Project</b> Wisconsin Center for Education Research
SPRING 2023	<b>Advanced Learning Through Evidence-Based STEM Teaching</b> Center for the Integration of Research, Teaching and Learning (CIRTL) Network
SUMMER 2022	<b>Intro to Evidence-Based Undergraduate STEM Teaching</b> Center for the Integration of Research, Teaching and Learning (CIRTL) Network
SPRING 2022	<b>Beyond Rhetoric: Developing an Ethical and Equitable Practice</b> University of Wisconsin-Madison Delta Teaching Program
FALL 2021	<b>Research Mentor Training</b> University of Wisconsin-Madison Delta Teaching Program

## OUTREACH AND SERVICE

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2024	ISU's Belonging, Equity, and Inclusion Conference attendee
2024	ISU's This is Biology: Networking panelist
2024 - <i>PRESENT</i>	<u>Soc for Behav Neuroendocrinol Online Research Symposium Committee secretary</u>
2024	Wisconsin Indigenous Research Forum attendee
2024	Biology Research Excellence in Wisconsin Seminars selection committee
2024	UW Advancing Health Equity and Diversity Scholars Program member
2020 - '23	<u>Antiracism Learning and Action in Neuroscience member</u>
2021, '22, '23	Shutesbury Elementary 5 <sup>th</sup> Grade "Lives of Scientists" presenter

2023		Integrative Biology Curriculum Committee member
2019, '20, '23		Undergraduate Zoological Society panelist
2021, '22, '23		Integrative Biology Graduate Recruitment Diversity panelist
2021		UW-Madison Diversity, Equity, and Inclusion Open House
2020 - '21		Integrative Biology Graduate Organization social chair
2020		Integrative Biology Racial Justice Task Force coordinator
2019		"BioHouse" tour guide
2014, '17		"Grandparents' University" volunteer
2017		Impression 5 "Nano Day" volunteer
2017		Students Today Leaders Forever Alternative Spring Break participant
2016 - '17		"Take Back the Women's Study Lounge" Protest lead organizer
2015 - '16		Residence Education Staff Council vice president
2014 - '16		McDonel Hall resident assistant (RA)
2014, '15		Spartans Give Back: Day of Service participant
2013 - '16		Briggs Ambassador tour guide
2015		Behavioral Ecology of African Mammals Study Abroad participant
2014 - '15		Committee on Diversity and Residence Advocacy chair
2013 - '15		Spectrum Queer Caucus Residence Hall Association representative

## **PUBLICITY**

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2024		<a href="#"><u>UW Undergraduate Mentor Award</u></a>
2022		<a href="#"><u>UW-Madison College of Letters and Sciences Alumni Magazine Cover Feature</u></a>
2022		<b>SBN Annual Meeting Poster Blast Presenter</b>
2021		<a href="#"><u>eNeuro Journal Featured Research</u></a>